Claims

That which is claimed is:

1. A system for assigning a call to one of a plurality of wireless frequency channels in a wireless communication network, comprising:

a wireless transceiver that assigns the call to one of the plurality of wireless frequency channels; and

a modulation control device that identifies one of the plurality of wireless frequency channels for the call and provides an assignment modulation parameter to the transceiver for assigning the call to the frequency channel, wherein the assignment modulation parameter includes a phase.

2. The system in claim 1, wherein the wireless communication network comprises an advanced mobile phone system (AMPS) network.

3. The system in claim 1, wherein the modulation control device provides assignment modulation parameters including timeslot and frequency to the transceiver.

4 The system in claim 3, wherein the wireless communication network comprises a time division multiple access wireless network.

5. The system in claim 3, wherein the wireless communications network comprises a time division multiple access personal communications system (PCS) network.

6. The system in claim 3, wherein the wireless communications network comprises a time division multiple access global system for mobile communications (GSM) network.

7. A modulation control device for use in a wireless communication network to assign a call to a next frequency channel selected from a plurality of frequency channels, comprising:

a threshold detector that measures a transmission quality of each frequency channel; and

a modulation control mechanism that selects the next available frequency channel based on the frequency channel quality measurement of the threshold detector, and that selects a phase adjustment value, whereby the call is assigned to the next available frequency channel at the selected phase adjustment value.

8. The modulation control device of claim 7, wherein the modulation control mechanism calculates the phase adjustment value to assign to the frequency channel.

9. The modulation control device of claim 7, wherein the modulation control mechanism stores a plurality of phase adjustment values.

10. The modulation control device of claim 7, wherein the modulation control mechanism selects the phase adjustment value that maximizes the phase separation between the calls on a single frequency channel

11. The modulation control device of claim 7, wherein the modulation control mechanism selects the phase adjustment value that provides a unique resultant phase value for the call on the frequency channel.

12. A mobile unit for use in a wireless communication network with a plurality of frequency channels, comprising:

a transceiver; and

a mobile modulation control device that receives a phase adjust value over the wireless communication network, and provides the phase adjustment value to the transceiver for call retrieval during demodulation and for modulation during transmission.

13. A method for use in a wireless communication network with a plurality of frequency channels for assigning a call to one of the frequency channels, comprising:

assigning a frequency channel and a phase adjustment value to the call;

communicating the phase adjustment value to a mobile unit that is associated with the call; and

associating the phase adjustment value with the call so that the phase adjustment value can be used for transmitting the call and referenced for receiving the call.

14. A method for use in a wireless communication network with a plurality of frequency channels for assigning a call to one of the frequency channels, comprising:

measuring a transmission quality of the frequency channels individually;

evaluating the transmission quality of each frequency channel until a first frequency channel having a suitable transmission quality is identified; and

assigning the call to the first frequency channel and assigning a first phase adjustment value to the call.

15. The method of claim 14 further comprising the step of associating the phase adjustment value with the call so that the phase adjustment value can be used for transmitting the call and referenced for receiving the call.

16. The method of claim 14 wherein the evaluating step comprises comparing the transmission quality of the frequency channel to a value until the transmission quality exceeds the value.

17. A method for use in a wireless communication network with a plurality of frequency channels divided into a plurality of timeslots for assigning a call to at least one of the timeslots in one of the frequency channels, comprising:

measuring a transmission quality of the frequency channels individually during each timeslot;

evaluating the transmission quality of each frequency channel during each timeslot until a first frequency channel having a suitable transmission quality is identified; and

assigning the call to the first frequency channel and assigning a first phase adjustment value to the call.

18. The method of claim 17 further comprising the step of associating the phase adjustment value with the call so that the phase adjustment value can be used for transmitting the call and referenced for receiving the call.

19. The method of claim 17 wherein the evaluating step comprises comparing the transmission quality of the frequency channel during each timeslot to a value until the transmission quality exceeds the value.

20. A method for use by a mobile unit to receive calls which are transmitted with a phase adjustment value, comprising:

receiving a phase adjustment value that identifies, at least in part, a first call received on a frequency channel; and

demodulating the first call on the frequency channel utilizing the phase adjustment value.

21. The method of claim 20 further comprising the step of filtering out noise.

22. A method for use by a mobile unit to transmit calls which have been assigned a phase adjustment value, comprising:

receiving a phase adjustment value that identifies, at least in part, a first call; and

modulating the call utilizing the phase adjustment value.